



IFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

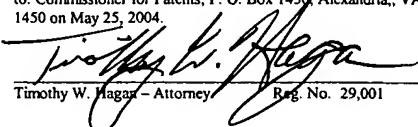
Application of

Applicants : Yang et al.
Serial No. : 10/785,274
Filed : February 24, 2004
Title : **IMMOBILIZATION OF ENZYME ON A FIBROUS MATRIX**
Docket : OSU 0003 PA/41096.8/01ID85F

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the
United States Postal Service as first class mail in an envelope addressed
to: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-
1450 on May 25, 2004.


Timothy W. Hagan - Attorney Reg. No. 29,001

Sir:

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.56, 1.97, AND 1.98

Applicants submit herewith patents, publications, and other information of which they are aware, which they believe may be material, as defined in 37 CFR §1.56(b), to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR §1.56(a). While the information referred to in this Information Disclosure Statement may be material pursuant to 37 CFR §1.56(b), the filing of this Information Disclosure Statement is not intended to, pursuant to 37 CFR §1.97(h), constitute an admission that any patent, publication, or other information referred to is, or is considered to be, material to the patentability of this invention. No representation is made that a reference is "prior art" within the meaning of 35 U.S.C. §§102 and 103, and Applicants reserves the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish otherwise. Further, pursuant to 37 CFR §1.97(g), the filing of this Statement should not be construed as a statement that a search has been made or that no other material information exists.

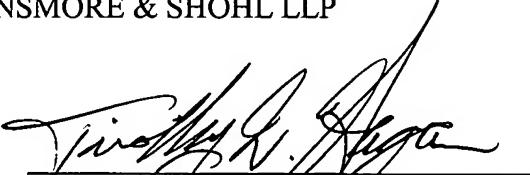
Serial No. 10/785,274
Docket No. OSU 0003 PA/41096.8/01ID85F

This Information Disclosure Statement is being filed within the period set forth in 37 CFR §1.97(b) because it is believed to be filed before the mailing date of a first office action on the merits.

The Office has waived the requirement pursuant to 37 CFR 1.98 (a)(2)(i) for submitting a copy of each cited U.S. patent and each U.S. patent application publication for all U.S. national patent applications filed after June 30, 2003 and for all international applications that have entered the national stage under 35 USC § 371 after June 30, 2003. Therefore, no copies of each cited U.S. patent and each cited U.S. patent application publication are enclosed, but the cited U.S. patents and the cited U.S. patent application publications are listed on PTO/SB/08A.

Respectfully submitted,
DINSMORE & SHOHL LLP

By



Timothy W. Hagan
Registration No. 29,001

One Dayton Centre
One South Main Street, Suite 1300
Dayton, Ohio 45402-2023
Telephone: (937) 449-6400
Facsimile: (937) 223-0724

TWH/ems
Encls.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

				Application Number	10/785,274
				Filing Date	February 24, 2004
				First Named Inventor	Shang-Tian Yang
				Art Unit	
				Examiner Name	
Sheet	1	of	6	Attorney Docket Number	OSU 0003 PA/41096.8/01ID85F

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		TALABARDON ET AL., "Acetic Acid Production from Lactose by an Anaerobic Thermophilic Coculture Immobilized in a Fibrous-Bed Bioreactor", Biotechnol. Prog. 2000, 16, pp. 1008-1017	
		HUANG ET AL., "Acetate Production from Whey Lactose Using Co-Immobilized Cells of Homolactic and Homoacetic Bacteria in a Fibrous-Bed Bioreactor", Biotechnology and Bioengineering, Vol. 60, No. 4, Nov. 20, 1998, pp. 498-507	
		YANG ET AL., "Production of Cell-Free Xanthan Fermentation Broth by Cell Adsorption on Fibers", Biotechnol. Prog. 1998, 14, pp. 259-264	
		YANG ET AL., "A Novel Recycle Batch Immobilized Cell Bioreactor for Propionate Production from Whey Lactose", Biotechnology and Bioengineering, Vol. 45, (1995), pp. 379-386	
		ALBAYRAK ET AL., "Production of Galacto-Oligosaccharides From Lactose by Aspergillus oryzae β -Galactosidase Immobilized on Cotton Cloth", Biotechnology and Bioengineering, Vol. 77, No. 1, Jan. 5, 2002, pp. 8-19	
		ZEMEK ET AL., "Crosslinked polyethylenimine: an enzyme carrier with spacers of various lengths introduced in crosslinking reaction", Enzyme Microb. Technol., 1982, Vol. 4, July, pp. 233-238	
		JENDRISAK ET AL., "THE USE OF POLYETHYLENEIMINE IN PROTEIN PURIFICATION", Protein Purification: Micro to Macro, Proceedings of a Cetus-UCLA Symposium Held at Frisco, Colorado, March 29-April 4, 1987, pp. 75-97	
		WASSERMAN ET AL., "High-Yield Method for Immobilization of Enzymes", Biotechnology and Bioengineering, Vol. XXII, (1980), pp. 271-287	
		EMNEUS ET AL., "Comparison between different inorganic supports for the immobilization of amyloglucosidase and α -amylase to be used in enzyme reactors in flow-injection systems," Analytica Chimica Acta, 276 (1993), pp. 319-328	
		YANG ET AL., "A Dynamic Light Scattering Study of β -Galactosidase: Environmental Effects on Protein Conformation and Enzyme Activity", Biotechnol. Prog. 1994, 10, pp. 525-531	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				Complete if Known	
				Application Number	10/785,274
				Filing Date	February 24, 2004
				First Named Inventor	Shang-Tian Yang
				Art Unit	
				Examiner Name	
Sheet	2	of	6	Attorney Docket Number	OSU 0003 PA/41096.8/01ID85F

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
		KUMAR ET AL., "Whole blood glucose determination using glucose oxidase immobilized on cotton cheese cloth", <i>Analytica Chimica Acta</i> 338 (1997), pp. 135-140		T ²
		KAMATH ET AL., "Urease Immobilized on Polyethyleneimine Cotton Cloth", <i>Applied Biochemistry and Biotechnology</i> , Vol. 19, 1988, pp. 251-258		
		DAS ET AL., "Short Communication: Immobilization of urease from pigeonpea (<i>Cajanus cajan L.</i>) on flannel cloth using polyethyleneimine", <i>World Journal of Microbiology & Biotechnology</i> , Vol. 14, 1998, pp. 927-929		
		YAMAZAKI ET AL., "IMMOBILIZATION OF INVERTASE ON POLYETHYLENIMINE-COATED COTTON CLOTH", <i>Biotechnology Letters</i> , Vol. 6, No. 3, (1984), pp. 165-170		
		D'SOUZA ET AL., "Cloth Bioreactor containing yeast cells immobilized on cotton cloth using polyethylenimine", <i>Appl Microbiol Biotechnol</i> (1988), 29, pp. 136-140		
		SAKO ET AL., "Recent progress on research and applications of non-digestible galacto-oligosaccharides", <i>International Dairy Journal</i> 9 (1999), pp. 69-80		
		PLAYNE ET AL., "1. COMMERCIALLY AVAILABLE OLIGOSACCHARIDES", <i>Bulletin of the IDF</i> 313, pp. 10-22, 1996		
		SHIN ET AL., "Continuous production of galacto-oligosaccharides from lactose by <i>Bullera singularis</i> β -galactosidase immobilized in chitosan beads", <i>Process Biochemistry</i> , Vol. 33, No. 8, 1998, pp. 787-792		
		FODA ET AL., "Continuous production of oligosaccharides from whey using a membrane reactor", <i>Process Biochemistry</i> 35 (2000), pp. 581-587		
		YANG ET AL., "Novel Products and New Technologies for Use of a Familiar Carbohydrate, Milk Lactose", <i>Journal of Dairy Science</i> , Vol. 78, No. 11, 1995, pp. 2541-2562		

Examiner Signature		Date Considered
--------------------	--	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Substitute for form 1449/PTO				Complete if Known	
				Application Number	10/785,274
				Filing Date	February 24, 2004
				First Named Inventor	Shang-Tian Yang
				Art Unit	
				Examiner Name	
Sheet	3	of	6	Attorney Docket Number	OSU 0003 PA/41096.8/01ID85F

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
		BERGER ET AL., "OLIGOSACCHARIDES SYNTHESIS BY FREE AND IMMOBILIZED β -GALACTOSIDASES FROM THERMUS AQUATICUS YT-1", Biotechnology Letters, Vol. 17, No. 10. (Oct. 1995), pp. 1077-1080		
		MOZAFFAR ET AL., "Effect of glutaraldehyde on oligosaccharide production by β -galactosidase from Bacillus circulans", Appl Microbiol Biotechnol (1987) 25, pp. 426-429		
		MATSUMOTO ET AL., "Production of Galactooligosaccharides with β -Galactosidase", Denpun Kagaku, Vol. 36, No. 2, (1989), pp. 123-130		
		MOZAFFAR ET AL., "Continuous production of galacto-oligosaccharides from lactose using immobilized β -galactosidase from Bacillus circulans", Appl Microbiol Biotechnol (1986) 25, pp. 224-228		
		SHEU ET AL., "Production of galactooligosaccharides by β -galactosidase immobilized on glutaraldehyde-treated chitosan beads", Biotechnology Techniques, Vol. 12, No. 4, April 1998, pp. 273-276		
		KMINKOVA ET AL., "IMMOBILIZATION OF MOLD BETA-GALACTOSIDASE", Collection Czechoslovak Chem. Commun. (Vol. 53), (1988), pp. 3214-3219		
		BERGER ET AL., "IMMOBILIZATION OF β -GALACTOSIDASES FROM THERMUS AQUATICUS YT-1 FOR OLIGOSACCHARIDES SYNTHESIS", Biotechnology Techniques, Vol. 9, No. 8, (August 1995), pp. 601-606		
		PRENOSIL ET AL., "Formation of Oligosaccharides during Enzymatic Lactose: Part I: State of Art", Biotechnology and Bioengineering, Vol. 30, (1987), pp. 10-19-1025		
		PEDERSEN ET AL., "Enzyme Adsorption in Porous Supports: Local Thermodynamic Equilibrium Model", Biotechnology and Bioengineering, Vol. XXVII, (1985), pp. 961-971		
		DISSING ET AL., "Polyelectrolyte complexes as vehicles for affinity precipitation of proteins", Journal of Biotechnology, 52, (1996), pp. 1-10		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				<i>Complete if Known</i>	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/785,274
<i>(Use as many sheets as necessary)</i>				Filing Date	February 24, 2004
				First Named Inventor	Shang-Tian Yang
				Art Unit	
				Examiner Name	
Sheet	4	of	6	Attorney Docket Number	OSU 0003 PA/41096.8/01ID85F

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		PRENOSIL ET AL., "Formation of Oligosaccharides during Enzymatic Lactose Hydrolysis and Their Importance in a Whey Hydrolysis Process: Part II: Experimental", Biotechnology and Bioengineering, Vol. 30, (1987), pp. 1026-1031	
		RUGH, "A Comparison of the Formation of Intermediary Products During Lactose Hydrolysis with Free and Immobilized Thermophilic Lactase", Applied Biochemistry and Biotechnology 7 (1982), pp. 27-29	
		PRENOSIL ET AL., "SCALE-UP OF MEMBRANE FIXED ENZYME REACTORS: MODELLING AND EXPERIMENTS", Desalination, 53 (1985), pp. 265-278	
		BOON ET AL., "Effect of temperature and enzyme origin on the enzymatic synthesis of oligosaccharides", Enzyme and Microbial Technology 26 (2000), pp. 271-281	
		ONDA ET AL., "Activity and Stability of Glucose Oxidase in Molecular Films Assembled Alternately with Polyions", Journal of Bioscience and Bioengineering, Vol. 87, No. 1, 1999, pp. 69-75	
		DEKKER, "Immobilization of a Lactase onto a Magnetic Support by Covalent Attachment to Polyethyleneimine-Glutaraldehyde-Activated Magnetite", Applied Biochemistry and Biotechnology, Vol. 22, 1989, pp. 289-310	
		BARDELETTI, "Enzyme Immobilization on Polyethyleneimine-Coated Magnetite Particles", Methods in Biotechnology, Vol. 1: Immobilization of Enzymes and Cells, Edited by G.F. Bickerstaff Humana Press Inc., Totowa, NJ, 1997, pp. 133-141	
		MATEO ET AL., "Reversible Enzyme Immobilization via a Very Strong and Nondistorting Ionic Adsorption on Support- Polyethyleneimine Composites", Biotechnology and Bioengineering, Vol. 68, No. 1, Apr. 5, 2000, pp. 98-105	
		ISGROVE ET AL., "Enzyme immobilization on nylon-optimization and the steps used to prevent enzyme leakage from the support", Enzyme and Microbial Technology 28 (2001), pp. 225-232	
		IWASAKI ET AL. "Galacto-oligosaccharide Production from Lactose by an Enzymic Batch Reaction Using β -Galactosidase", Process Biochemistry, Vol.31, No. 1, 1996, pp. 69-76	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				Complete if Known	
				Application Number	10/785,274
				Filing Date	February 24, 2004
				First Named Inventor	Shang-Tian Yang
				Art Unit	
				Examiner Name	
Sheet	5	of	6	Attorney Docket Number	OSU 0003 PA/41096.8/01ID85F

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ²
		MONSAN ET AL., "Enzymatic synthesis of oligosaccharides", FEMS Microbiology Reviews 16, (1995), pp.187-192			
		YANG ET AL., "Production of Galacto-Oligosaccharides from Lactose by Immobilized β -Galactosidase" In Applied Biocatalysis in Specialty Chemicals and Pharmaceuticals, ACS Symposium 776, American Cancer Society, Washington, DC, Chapter 9, pp. 131-154			
		BRYJAK, "Storage stabilization of enzyme activity by poly(ethyleneimine)", Bioprocess Engineering 13, (1995), pp. 177-181			
		NOWORYTA, "Kinetic behaviour of penicillin acylase stabilized by poly(ethyleneimine)", Bioprocess Engineering 13, (1995), pp. 183-187			
		MARGOLIN ET AL., "PREPARATION AND PROPERTIES OF PENICILLIN AMIDASE IMMOBILIZED IN POLYELECTROLYTE", Biochimica et Biophysica Acta, 660 (1981), pp. 359-365			
		MARGOLIN ET AL., "Enzymes in polyelectrolyte complexes" The effect of phase transition on thermal stability, Eur. J. Biochem. 146, (1985), pp. 625-632			
		FERNANDEZ-LAFUENTE ET AL., "Stabilization of immobilized enzymes against organic solvents: complete hydrophylization of enzymes environments by solid-phase chemistry with poly-functional macromolecules", Prog. Biotechnol., 15, 1998, pp. 405-410			
		FERNANDEZ-LAFUENTE ET AL., "Immobilization of lipases by selective adsorption on hydrophobic supports", Chem. Phys. Lipids, 93, 1998, pp. 185-187			
		KHAN ET AL., "Surfactant hydrophobic effect on the phase behavior of oppositely charged protein and surfactant mixtures: Lysozyme and sodium alkyl sulfates" Langmuir, 14, 1998, pp. 6818-6826			
		SUOMINEN ET AL., "Enhanced recovery and purification of Aspergillus glucoamylase from <i>Saccharomyces cerevisiae</i> by the addition of poly(aspartic acid) tails", Enzyme Microb. Technol., 15, 1998, pp.593-600			

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				<i>Complete if Known</i>	
				Application Number	10/785,274
				Filing Date	February 24, 2004
				First Named Inventor	Shang-Tian Yang
				Art Unit	
				Examiner Name	
Sheet	6	of	6	Attorney Docket Number	OSU 0003 PA/41096.8/01ID85F

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
		PARKER ET AL., "Recovery of a Charged-Fusion Protein from Cell Extracts by Polyelectrolyte Precipitation", Biotechnology and Bioengineering, Vol. 36, (1990), pp. 467-475			
		ZHAO ET AL., Polyelectrolyte precipitation of β -galactosidase fusions containing poly-aspartic acid tails", Journal of Biotechnology , 14 (1990), pp. 273-284			
		CARUSO ET AL., "Enzyme Multilayers and Colloid Particles: Assembly, Stability, and Enzymatic Activity", Langmuir 2000, 16, pp. 9595-9603			
		BAHULEKAR ET AL., "Polyethyleneimine in immobilization of biocatalysts", Enzyme Microb. Technol., 1991, Vol. 13, Nov., pp. 858-868			
		KAWAI ET AL., "High Conversion in Asymmetric Hydrolysis during Permeation through Enzyme-Multilayered Porous Hollow-Fiber Membranes", Biotechnol. Prog. 2001. 17. pp. 872-875			
		AXELSSON ET AL., "Economic Evaluation of the Kydrolysis of Lactose Using Immobilized β -Galactosidase", Applied Biochemistry and Biotechnology, Vol. 24/25, 1990, pp. 679-693			
		HOWLETT ET AL., "CARBONYLDIMIDAZOLE ACTIVATION OF A RAYON/POLYESTER CLOTH FOR COVALENT IMMOBILIZATION OF PROTEINS", Biotechnology Techniques, Vol. 5, No. 5, 1991, pp. 395-400			
		MOZAFFAR ET AL., "Purification and Properties of β -Galactosidases from <i>Bacillus circulans</i> ", Agric. Biol. Chem, 48 (12), 1984, pp. 3053-3061			

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.